

A REQUEST FOR INTERVIEW

Applicant's attorney, Benjamin A. Keim, attempted to schedule an interview with Examiner Langhnoja on December 15, 2008. The Examiner and Applicant's attorney were unable to conduct a telephonic interview due to scheduling conflicts. In the interest of expediting prosecution of this application, Applicant's attorney elected to file this Response prior to conducting a telephonic interview with the Examiner.

If any issue remains that prevents the Examiner from issuing a Notice of Allowance, Applicant's attorney wishes to address that issue in full during a telephonic interview during January 2009. Applicant's attorney proposes conducting the interview on January 26, 2009 at 2:00 pm EST. During the interview, Applicant's attorney wishes to discuss the claim amendments and arguments presented in this Response.

Applicant's attorney submits that all of the pending claims are in condition for allowance.

REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks.

Claims 1-57 are pending in the application, with claims 1, 14, 33, 35, 40, 50, 51, and 52 being independent. Claims 15, 16, 19, 20, 38, 39, 41 are canceled herein without prejudice to or disclaimer of the subject matter recited therein. Claims 1, 10, 14, 17, 18, 21, 34, 35, 40, 42, 48, and 50 are amended herein. Claim 58 is newly added. Support for the claim amendments and additions can be found in the original disclosure at least at page 9, lines 4-10; page 13, lines 22-24; page 16, lines 3-14; page 27, lines 13-17; and FIG. 14. No new matter has been added.

§ 102 REJECTIONS A. AND B.

A. Claims 14-23, 26-28, and 33-34 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0177381 (Kliger et al). Applicant respectfully traverses the rejection.

The MPEP states that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. . . . The identical invention must be shown in as complete detail as is contained in the . . . claim. . . . The elements must be arranged as required by the claim” MPEP §2131 (emphasis added). Consequently, under the guidelines of the MPEP set forth above, if there is *any* substantial difference between the reference cited by the Office and an applicant’s claim, the reference does NOT establish a *prima facie* case of

anticipation and, barring other rejections, such claim are in condition for allowance over the cited reference.

Independent Claim 14

Without conceding the propriety of the rejection and in the interest of expediting allowance of the application, Applicant amends independent claim 14 to include the elements of dependent claim 20 and the intervening claims (claims 15, 16, and 19). Accordingly, amended claim 14 represents subject matter already examined by the Office at the time of the last Office Action as dependent claim 20.

Independent claim 14 recites a system, comprising:

a computing hub for receiving and storing multimedia content;

a set-top box coupled with the computing hub and coupled with a multimedia content source in order to receive multimedia content directly from the multimedia content source, wherein the set-top box receives streaming Moving Picture Experts Group video modulated on coaxial cable rather than over an Internet protocol-based local area network, wherein the set-top box further receives multimedia content from the computing hub on the in-band channel, and wherein the set-top box sends data to the hub on an out-of-band channel and receives data from the hub on an in-band channel, a radio frequency filter blocks one or more frequencies of a signal from the multimedia content source to the set-top box and to the hub, and *the set-top box sends data to the hub on an out-of-band channel that uses a frequency blocked by the radio frequency filter* and receives data from the hub on an in-band channel that uses a frequency blocked by the radio frequency filter.

Applicant respectfully submits that no such system is disclosed by Kliger.

The grounds of rejection for Applicant's claim 20 (presented now as independent claim 14) are paragraphs 0022 and 0023 of Kliger (Office Action, page 4). Applicant initially notes that neither paragraph 0022 nor paragraph 0023 discusses sending data

from the set-top box to the hub. In Kliger paragraph 0022 "the **home media server 24 transmits** a legacy digital set-top box signal" (emphasis added). In Kliger paragraph 0023 "the **set-top boxes** [are configured] to **receive** legacy signals from the home media server" (emphasis added).

Kliger discusses "**5-42 Mhz** control signals transmitted **from the legacy set-top box**" (paragraph 0027; emphasis added). Kliger also discusses that "[s]ignals from the home media server 24 (preferably above **about 960 MHz**) pass over the coaxial wiring to the passive entry point device 32 but are **prevented from entering** the external cable network 10 **by the low pass filter 48**" (paragraph 0029; emphasis added). Figure 4 of Kliger shows item 48 as "LPF 5-860 MHz." Thus, in Kliger, the frequency transmitted by the set-top box (5-42 MHz) is within the frequencies allowed to pass through the low pass filter (5-860 MHz).

In contrast, Applicant's specification discloses that "an exemplary RF filter 122 is a bidirectional device, simultaneously clearing a frequency band of incoming signals in order to **create a quiet channel for in-house communication**; and also blocking in-house communication originating on the quieted frequencies (in reverse firewall fashion) from leaving a premises" (page 8, line 24-page 9, line 3; emphasis added). Accordingly, Kliger does not disclose a "*set-top box [that] sends data to the hub on an out-of-band channel that uses a frequency blocked by the radio frequency filter,*" as recited in Applicant's amended claim 14.

For at least the above reason, Applicant respectfully submits that Kliger fails to disclose each and every element recited in Applicant's amended claim 14. Applicant respectfully requests withdrawal of the §102 rejection.

Independent Claim 33

Independent claim 33 recites an electronic notching filter, comprising:

an incoming filter to produce a band of blocked frequencies in an incoming stream of multimedia signals, wherein the incoming filter blocks signals having one of the blocked frequencies from entering a media network from a multimedia headend; and

an *outgoing filter to block signals* that originate in the media network and prevent one of the blocked frequencies from leaving the media network, wherein *the range of blocked frequencies is from at least about 5 megahertz to most about 42 megahertz*.

Applicant respectfully submits that no such electronic notching filter is disclosed by Klinger.

Klinger discusses "[s]ignals entering or **leaving** the home distribution network 40 [which] preferably **fall within** two bands: **5-42 MHz**. for transmitting signals from the home distribution network 40 to the cable supplier head end; and 55-860 Mhz. for video signals from the cable network 10" (paragraph 0024; emphasis added). However, Klinger does not disclose—in fact Klinger teaches away from—an "*outgoing filter to block signals... wherein the range of blocked frequencies is from at least about 5 megahertz to most about 42 megahertz*," as recited in Applicant's claim 33.

For at least the above reason, Applicant respectfully submits that Klinger fails to disclose each and every element recited in Applicant's claim 33. Applicant respectfully requests withdrawal of the §102 rejection.

Applicant includes the elements of **dependent claims 15, 16, 19, and 20** into independent claim 14 and cancels claims 15, 16, 19, and 20 without prejudice, waiver, or disclaimer of the subject matter. Accordingly, the rejections of claims 15, 16, 19, and 20 are now moot.

Dependent claims 17-18, 21-23, 26-28, and 34 depend directly or indirectly from one of independent claims 1 or 33, respectively, and thus, are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features that, in combination with those recited in claims 1 or 33 are not disclosed by Klinger.

Applicant respectfully submits that the Office has failed to provide evidence disclosing each and every element of the claimed subject matter, and therefore, Applicant's claims are not anticipated. For all of these reasons, Applicant respectfully requests withdrawal of the §102 rejection of these claims.

B. Claims 40-49 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2004/0177369 (Akins et al). Applicant respectfully traverses the rejection.

Independent Claim 40

Without conceding the propriety of the rejection and in the interest of expediting allowance of the application, applicant amends independent claim 40 to include the elements of dependent claim 41. Accordingly, amended claim 40 represents subject matter already examined by the Office at the time of the last Office Action as dependent claim 41.

Independent Claim 40 recites a content protection system, comprising:

a content protector to create multiple scrambled program streams from a single program stream according to a key, wherein the content protector places ***an unscrambled video frame of program content in any one of the scrambled program streams and places an associated scrambled video frame of program content in***

each of the remaining multiple scrambled program streams, and wherein the identity of the scrambled program stream receiving the unscrambled video frame is recorded as a corresponding part of the key; and

a content decrypter to receive the multiple scrambled program streams and the key and decode the multiple scrambled program streams into a single program stream according to the key.

Applicant respectfully submits that no such content protection system is disclosed by Akins.

Akins is directed towards a "PVR [that] is adapted to provide conditional access to recorded service instances" (Abstract). Akins discusses a "multi-transport stream receiver-transmitter 328 [which] encrypts some or all of the **programs** included in the input transport streams 340 and then includes the **encrypted programs** in the output transport streams 342" (paragraph 0076; emphasis added). Akins also explains that "[s]ome of the programs included in input transport stream 340 do not need to be encrypted, and in that case the system controller 332 instructs the multi-transport stream transmitter-receiver 328 to transmit those **programs without encryption**" (paragraph 0076; emphasis added). Applicant has searched and failed to find any discussion in Atkins of video frames, scrambled or unscrambled.

In Applicant's specification "Fig. 13 shows two scrambled PID streams, but more than two could be used, however, two streams may use the least processing power. Each PID stream consists of a series of video frames, such as MPEG frames. In one implementation, some of the frames are 'correct' for producing a finished video sequence for display while other frames within the same PID stream are 'corrupted'" (page 24, lines 9-14). In contrast to Applicant's disclosure of video frames for producing a finished

video sequence, Akins discusses distinct types of programs (encrypted programs and programs without encryption).

Accordingly, Applicant respectfully submits that Atkins does not disclose "*an unscrambled video frame of program content in any one of the scrambled program streams and places an associated scrambled video frame of program content in each of the remaining multiple scrambled program streams,*" as recited in Applicant's amended claim 40.

Akins discusses that "[o]nly legitimate subscribers of the STS 100 have the necessary entitlements and keys for decrypting the payload 210" (paragraph 0046). Atkins also discusses "[a]n ECM [which] is a system specific packet that includes, among other things, a service identifier (SID) 222, a key identifier 224, decryption-key-material (DKM) 226, temporal information 228, and an authentication token 230" (paragraph 0049). Akins further discusses a "series of different ECMs 216, each one having a different DKM 226, [that] are multiplexed into the transport stream 202 so as to provide the DSCT-PVR 110 with the necessary information for generating the control words for decrypting the digital service" (paragraph 0052). Atkins discusses a "database 340 [that] includes, among other things, the serial numbers and public keys of the DSCT-PVRs 110 of the STS 100" (paragraph 0070). Akins further discusses an "entitlement generator 336 [which] provides the encryption information to the multi-transport stream transceiver 328, which generates control words therefrom for encrypting the service instances" (paragraph 0071). Akins also discusses an "encryptor [which] uses the MSK to encrypt the counter value to produce a control word. The control word [in Akins] is used by the encryptor as a key for encrypting a portion of the service instance" (paragraph 0077).

Akins discusses “key” and “encryption”; however, Atkins does not disclose “*the identity of the scrambled program stream receiving the unscrambled video frame is recorded as a corresponding part of the key*,” as recited in Applicant's amended claim 40.

For at least the above reasons, Applicant respectfully submits that Akins fails to disclose each and every element recited in Applicant's amended claim 40. Applicant respectfully requests withdrawal of the §102 rejection.

Applicant includes the elements of **dependent claim 41** into independent claim 40. Accordingly, Applicant cancels dependent claim 41 without prejudice, waiver, or disclaimer of the subject matter. Accordingly, the rejection of claim 41 is now moot.

Dependent claims 42-49 depend directly or indirectly from independent claim 40, and thus, are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features that, in combination with those recited in claim 40 are not disclosed by Akins.

For example, Applicant respectfully asserts that Akins does not disclose a “*content protector [that] creates multiple scrambled program streams from the single program stream by randomly shuffling MPEG slices of I frames from the single program stream*,” as recited in Applicant's amended, **dependent claim 48**.

Applicant respectfully submits that the Office has failed to provide evidence disclosing each and every element of the claimed subject matter, and therefore, Applicant's claims are not anticipated. For all of these reasons, Applicant respectfully requests withdrawal of the §102 rejection of these claims.

§ 103 REJECTIONS A., B., C., D., E., F., H., I., J., AND K.

A. Claims 1-5 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al) in view of U.S. Patent No. 6,983,478 (Grauch et al). Applicant respectfully traverses the rejection.

Independent Claim 1

Without conceding the propriety of the rejection and in the interest of expediting allowance of the application, Applicant amends independent claim 1.

Independent claim 1 recites a method for creating a two-way communication from two unidirectional data channels, comprising:

communicatively coupling a set-top box with a hub of a media network, wherein the set-top box receives a streaming Moving Picture Experts Group (MPEG) video modulated on a coaxial cable rather than over an Internet protocol-based local area network;

filtering signals received by the media network from a multimedia headend to provide one or more available frequencies for communication between the set-top box and the hub;

filtering signals transmitted from the media network to the multimedia headend to prevent media network signals of the one or more available frequencies for communication from leaving the media network;

tuning the set-top box to the one or more available frequencies for communication to send ALOHA data to the hub on an out-of-band channel through a Quadrature Phase Shift Keying (QPSK) demodulator;

tuning the set-top box to a frequency other than the one or more available frequencies for communication between the set-top box and the hub to receive the signals from the multimedia headend on the out-of-band channel; and

tuning the set-top box to receive Quadrature Amplitude Modulation (QAM) modulated MPEG data and a multimedia content from the hub on an in-band channel;

wherein the filtering is performed by a notching filter;

wherein *the hub is a personal computer comprising an API layer configured to mask the two unidirectional data channels such that the two unidirectional channels*

present an interface that appears as a bidirectional channel to applications and functions on the hub.

Applicant respectfully submits that no such method is disclosed, taught, or suggested by Kliger and/or Grauch, alone or in combination.

Kliger is directed towards "[a] home content distribution solution that provides distribution capabilities between a Home Media Server (HMS) and remote units, such as a thin Client stand-alone box or an existing legacy digital set-top box (STB)" (Abstract). Kliger discusses that "the home media server 24 includes a diplexer 66, an RF section 70, a digital signal processor 74 and a controller 78" (paragraph 0027).

Grauch is directed towards "a collector, associated with a subscriber's set-top box ('STB'), to obtain data about any 'events'—subscriber actions or changes in programming—that are of interest" (column 2, lines 39-42). Grauch discusses a "[s]ystem 20 [which] is a demographics and programming ratings collection and analysis system that may be deployed for use on an interactive media delivery system such as the Interactive Video Services Network deployed by BellSouth Interactive Media Services" (column 4, lines 27-32). In the "system 20 [of Grauch], clickstream data packets are uploaded to the staging server 70 over a slotted-ALOHA (a contention-based standard transport protocol) data transmitter of the STB 30" (column 18, lines 11-14).

Applicant has searched and failed to find any disclosure, teaching, or suggestion in Kliger and/or Grauch of a "*hub [which] is a personal computer comprising an API layer configured to mask the two unidirectional data channels such that the two unidirectional channels present an interface that appears as a bidirectional channel to applications and functions on the hub,*" as recited in Applicant's amended claim 1.

Dependent claims 2-5 depend directly or indirectly from independent claim 1, and thus, are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features that, in combination with those recited in claim 1 are not disclosed, taught, or suggested by Kliger and/or Grauch, alone or in combination.

Applicant respectfully requests withdrawal of the §103 rejection of these claims.

B. Claims 6-8 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al) in view of U.S. Patent No. 6,983,478 (Grauch et al) and further in view of U.S. Patent Application Publication No. 2004/0268401 (Gray et al). Applicant respectfully traverses the rejection.

Dependent claims 6-8 depend directly or indirectly from independent claim 1, and thus, are allowable as depending from an allowable base claim. Applicant explains above why the primary and secondary references do not disclose, teach, or suggest all the elements of independent claim 1. Gray fails to compensate for these deficiencies. These claims are also allowable for their own recited features that, in combination with those recited in claim 1 are not disclosed, taught, or suggested by Kliger, Grauch, and/or Gray, alone or in combination.

Applicant respectfully requests withdrawal of the §103 rejection of these claims.

C. **Claims 9-13 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al) in view of U.S. Patent No. 6,983,478 (Grauch et al) and further in view of U.S. Patent Application Publication No. 2002/0001386 (Akiyama et al).** Applicant respectfully traverses the rejection.

Dependent claims 9-13 depend directly or indirectly from independent claim 1, and thus, are allowable as depending from an allowable base claim. Applicant explains above why the primary and secondary references do not disclose, teach, or suggest all the elements of independent claim 1. Akiyama fails to compensate for these deficiencies. These claims are also allowable for their own recited features that, in combination with those recited in claim 1 are not disclosed, taught, or suggested by Kliger, Grauch, and/or Akiyama, alone or in combination.

For example, Applicant respectfully asserts that Kliger, Grauch, and/or Akiyama, alone or in combination, do not disclose, teach, or suggest *"sending multiple program streams each representing a different scrambled versions of a same content, wherein a one unscrambled version of the content can be derived from the multiple program streams using a key,"* as recited in Applicant's amended, **dependent claim 10**.

Applicant respectfully requests withdrawal of the §103 rejection of these claims.

D. Claims 35-37 stand rejected under § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al) in view of U.S. Patent Application Publication No. 2004/0268401 (Gray et al) and further in view of U.S. Patent Application Publication No. 2003/0014764 (Saladino et al). Applicant respectfully traverses the rejection.

Independent Claim 35

Without conceding the propriety of the rejection and in the interest of expediting allowance of the application, Applicant's amends independent claim 35.

Independent claim 35 recites an adapter, comprising:

a tuner to tune an out-of-band channel of a set-top box to a frequency selected for communication over a media network, the tuner configured to receive *data sent from the set-top box using an ALOHA protocol on a first frequency for data directed within the media network and a second frequency for data directed out of the media network*, wherein the media network has a hub that communicates over an Internet Protocol-based local area network with one or more network media nodes and communicates over the out-of-band channel and the in-band channel with the set-top box and one or more other set-top boxes;

a quadrature phase shift keying (QPSK) demodulator coupled with the tuner to demodulate upstream data signals from the tuner to the hub;

a quadrature amplitude modulation (QAM) modulator to receive and modulate data and multimedia content from the hub;

an upconverter coupled with the quadrature amplitude modulation (QAM) modulator to upconvert modulated data and multimedia content signals to the set-top box; and

a Moving Picture Experts Group (MPEG) decoder and a National Television System Committee (NTSC) video standard encoder to receive video content from the hub and a radio frequency modulator coupled with the MPEG decoder/NTSC encoder to modulate video content signals for the set-top box.

Applicant respectfully submits that no such adapter is disclosed, taught, or suggested by Kliger, Gray, and/or Saladino, alone or in combination.

Applicant agrees with the Office that "the combination [of Kliger, Gray, and Saladino] is silent with respect to said "the set-top box sends data to the hub using an ALOHA protocol" (Office Action, page 24). Accordingly, Kliger, Gray, and Saladino do not disclose, teach, or suggest "*data sent from the set-top box using an ALOHA protocol on a first frequency for data directed within the media network and a second frequency for data directed out of the media network,*" as recited in Applicant's amended claim 35.

Applicant agrees with the Office that "the combination [of Kliger, Gray, and Saladino] is silent with respect to 'a Moving Picture Experts Group (MPEG) decoder and a National Television System Committee (NTSC) video standard encoder to receive video content from the hub and a radio frequency modulator coupled with the MPEG decoder/NTSC encoder to modulate video content signals for the set-top box'" (Office Action, page 23). Accordingly, Kliger, Gray, and Saladino do not disclose, teach, or suggest "*a Moving Picture Experts Group (MPEG) decoder and a National Television System Committee (NTSC) video standard encoder to receive video content from the hub and a radio frequency modulator coupled with the MPEG decoder/NTSC encoder to modulate video content signals for the set-top box,*" as recited in Applicant's claim 35.

Dependent claims 36 and 37 depend from independent claim 35, and thus, are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features that, in combination with those recited in claim 35 are not disclosed, taught, or suggested by Kliger, Gray, and/or Saladino, alone or in combination.

Applicant respectfully requests withdrawal of the §103 rejection of these claims.

E. Claim 38 stands rejected under § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al) in view of U.S. Patent Application Publication No. 2004/0268401 (Gray et al) in view of U.S. Patent Application Publication No. 2003/0014764 (Saladino et al) and further in view of U.S. Patent Application Publication No. 2003/0106056 (Naimpally et al). Applicant respectfully traverses the rejection.

Applicant includes the elements of **dependent claim 38** into independent claim 35. Accordingly, Applicant cancels dependent claim 38 without prejudice, waiver, or disclaimer of the subject matter. Accordingly, the rejection of claim 38 is now moot.

F. Claim 39 stands rejected under § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al) in view of U.S. Patent Application Publication No. 2004/0268401 (Gray et al) in view of U.S. Patent Application Publication No. 2003/0014764 (Saladino et al) and further in view of U.S. Patent No. 6,983,478 (Grauch et al). Applicant respectfully traverses the rejection.

Applicant includes the elements of **dependent claim 39** into independent claim 35. Accordingly, Applicant cancels dependent claim 39 without prejudice, waiver, or disclaimer of the subject matter. Accordingly, the rejection of claim 39 is now moot.

G. Claim 50 stands rejected under § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al) in view of U.S. Patent Application Publication No. 2002/0059623 (Rodriguez et al). Applicant respectfully traverses the rejection.

Independent Claim 50

Without conceding the propriety of the rejection and in the interest of expediting allowance of the application, Applicant's amends independent claim 50.

Independent claim 50 recites a method of using a media network having a hub to send multimedia content to media network nodes and to set-top boxes in the media network, wherein the set-top boxes receive streaming Moving Picture Experts Group video modulated on coaxial cable rather than over an Internet protocol-based local area network, comprising:

tuning the set-top boxes to selected *frequencies of at least about 5 megahertz to at most about 42 megahertz*, wherein the selected frequencies are reserved for communication in the media network by a bidirectional electronic radio frequency *notching filter configured to block signals of the selected frequencies* incoming from a multimedia head and to block outgoing signals of the selected frequencies from leaving the media network;

requesting a list of programs from the hub on an out-of-band channel of a set-top box using a one of the selected frequencies, wherein the out-of-band channel comprises frequencies from at least about 5 megahertz to at most about 42 megahertz and is used for *upstream communication from the set-top box to the hub by sending ALOHA data via a Quadrature Phase Shift Keying (QPSK) demodulator*;

receiving a list of programs from the hub on an in-band channel of the set-top box using one of the selected frequencies, wherein the in-band channel is used for downstream communication from the hub to the set-top box by sending data via an Annex B type Quadrature Amplitude Modulation (QAM) modulator and an upconverter;

requesting program content on the out-of-band channel of the set-top box using one of the selected frequencies;

receiving a confirmation of the requesting program content on the in-band channel of the set-top box using one of the selected frequencies; and

receiving the program content on the in-band channel of the set-top box using one of the selected frequencies,

wherein the *program content is encrypted by creating two encrypted program streams from the program content such that for each I frame in the MPEG data one of the two program streams contains an un-modified I frame and the other of the two program streams contains random shuffling of MPEG slices of the I frame and the program content is decrypted by a binary key that for a given I frame identifies the one of the two encrypted program streams as containing the un-modified I frame when a digit of the binary key is 0 and identifies the other of the two program streams as containing the un-modified I frame when the digit of the binary key is 1;*

wherein the hub is a personal computer comprising an API layer configured to mask the two unidirectional data channels such that the two unidirectional channels present an interface that appears as a bidirectional channel to applications and functions on the hub.

Applicant respectfully submits that no such method is disclosed, taught, or suggested by Kliger and/or Rodriguez, alone or in combination.

Rodriguez is directed towards a "dual mode file system [that] can generally be described as including a memory with logic, and a processor configured with the logic to use remote data to support the processor until the logic detects that local data is available" (paragraph 0006). Rodriguez discusses a "platform library 356 [that] is a collection of utilities useful to applications, such as a timer manager, a compression manager, a configuration manager, an HTML parser, a database manager, a widget toolkit, a string manager, and other utilities (not shown). These utilities are accessed by applications via application programming interfaces (APIs) as necessary so that each application does not have to contain these utilities" (paragraph 0065).

For at least reasons similar to those discussed above with respect to claim 33, Kliger does not disclose, teach, or suggest "*tuning the set-top boxes to selected frequencies of at least about 5 megahertz to at most about 42 megahertz, wherein the*

*selected frequencies are reserved for communication in the media network by a bidirectional electronic radio frequency **notching filter configured to block signals of the selected frequencies**,*” as recited in Applicant’s amended claim 50. Rodriguez fails to compensate for this deficiency.

For at least reasons similar to those discussed above with respect to claim 35, Klinger does not disclose, teach, or suggest “*upstream communication from the set-top box to the hub by sending **ALOHA** data via a **Quadrature Phase Shift Keying (QPSK)** demodulator,*” as recited in Applicant’s amended claim 50. Rodriguez fails to compensate for this deficiency.

Additionally, Applicant has search and failed to find, any teaching, suggestion, or disclosure in Klinger or Rodriguez of “*program content is encrypted by creating **two encrypted program streams** from the program content such that for each I frame in the MPEG data one of the two program streams contains an un-modified I frame and the other of the two program streams contains random shuffling of MPEG slices of the I frame and the program content is **decrypted by a binary key** that for a given I frame identifies the one of the two encrypted program streams as containing the un-modified I frame when a digit of the binary key is 0 and identifies the other of the two program streams as containing the un-modified I frame when the digit of the binary key is 1,*” as recited in Applicant’s amended claim 50.

For at least reasons similar to those discussed above with respect to claim 1, Klinger does not disclose, teach, or suggest “*a personal computer comprising an **API layer configured to mask the two unidirectional data channels** such that the two unidirectional channels present an interface that appears as a bidirectional channel to*

applications and functions on the hub,” as recited in Applicant’s amended claim 50. Rodriguez does not to disclose, teach, or suggest this use of an API, and thus, fails to compensate for the deficiency in Kliger.

For at least the above reasons, Applicant respectfully requests withdrawal of the §103 rejection of this claim.

H. Claim 51 stands rejected under § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al) in view of U.S. Patent No. 5,828,370 (Moeller et al). Applicant respectfully traverses the rejection.

Independent Claim 51

Without conceding the propriety of the rejection and in the interest of expediting allowance of the application, Applicant's amends independent claim 51.

Independent claim 51 recites a method of using a media network having a hub to send multimedia content to media network nodes and to set-top boxes in the media network, comprising:

tuning the set-top boxes to selected frequencies reserved for communication in the media network;

requesting a trick mode on an out-of-band channel of a set-top box using one of the selected frequencies, wherein *the out-of-band channel comprises frequencies from at least about 5 megahertz to at most about 42 megahertz; and is used for upstream communication from the set-top box to the hub by sending ALOHA data;*

receiving a confirmation of the requesting a trick mode on the in-band channel of the set-top box using one of the selected frequencies, wherein the in-band channel is used for downstream communication from a hub to the set-top box by sending data via a Quadrature Amplitude Modulation (QAM) modulator and an upconverter and *the hub is a computer comprising an API layer configured to mask the out-of-band channel and the in-band channel*

such that the out-of-band channel and the in-band channel present an interface that appears as a bidirectional channel to applications and functions on the hub; and

receiving the program content in the trick mode on the in-band channel of the set-top box using one of the selected frequencies.

Applicant respectfully submits that no such method is disclosed, taught, or suggested by Kliger and/or Moeller, alone or in combination.

Moeller is directed towards "[a] system and method which displays a graphical icon, such as a slider bar, on a subscriber's television or display unit for indexing to different positions in a video stream in an interactive video delivery system" (Abstract). Moeller discusses a "media server [which] stores normal play streams, and may store one or more corresponding trick play streams, i.e., fast forward and/or fast reverse video streams, for each of the normal play streams" (column 4, lines 28-31).

For at least reasons similar to those discussed above with respect to claim 35, Kliger does not disclose, teach, or suggest an *"out-of-band channel [which] comprises frequencies from at least about 5 megahertz to at most about 42 megahertz and is used for upstream communication from the set-top box to the hub by sending ALOHA data,"* as recited in Applicant's amended claim 51. Moeller fails to compensate for this deficiency.

For at least reasons similar to those discussed above with respect to claim 1, Kliger does not disclose, teach, or suggest a *"hub [that] is a computer comprising an API layer configured to mask the out-of-band channel and the in-band channel such that the out-of-band channel and the in-band channel present an interface that appears as a*

bidirectional channel to applications and functions on the hub,” as recited in Applicant’s amended claim 51. Moeller fails to compensate for this deficiency.

For at least the above reasons, Applicant respectfully requests withdrawal of the §103 rejection of this claim.

I. Claims 52-54 stand rejected under § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al). Applicant respectfully traverses the rejection.

Independent Claim 52

Without conceding the propriety of the rejection and in the interest of expediting allowance of the application, Applicant's amends independent claim 52.

Independent claim 52 recites one or more computer readable media containing instructions that are executable by a computer to perform actions comprising:

filtering signals received by the media network to provide one or more clear frequencies for communicating between a set-top box and a hub of a media network;

tuning the set-top box to send data to the hub on an out-of-band channel, wherein *the out-of-band channel comprises frequencies from at least about 5 megahertz to at most about 42 megahertz and is used for upstream communication from the set-top box to the hub by sending ALOHA data;* and

tuning the set-top box to receive data from the hub on an in-band channel, wherein the in-band channel is used for downstream communication from the hub to the set-top box by sending data via a Quadrature Amplitude Modulation (QAM) modulator and an upconverter, wherein *the hub is a computer comprising an API layer configured to mask the out-of-band channel and the in-band channel such that the two channels present an interface that appears as a bidirectional channel to applications and functions on the hub.*

Applicant respectfully submits that no such computer readable media is disclosed, taught, or suggested by Kliger.

For at least reasons similar to those discussed above with respect to claim 35, Kliger does not disclose, teach, or suggest an *“out-of-band channel [which] comprises frequencies from at least about 5 megahertz to at most about 42 megahertz and is used for upstream communication from the set-top box to the hub by sending ALOHA data,”* as recited in Applicant’s amended claim 52.

For at least reasons similar to those discussed above with respect to claim 1, Kliger does not disclose, teach, or suggest a *“hub [that] is a computer comprising an API layer configured to mask the out-of-band channel and the in-band channel such that the out-of-band channel and the in-band channel present an interface that appears as a bidirectional channel to applications and functions on the hub,”* as recited in Applicant’s amended claim 52.

For at least the above reasons, Applicant respectfully requests withdrawal of the §103 rejection of this claim.

J. Claims 24-25 and 55 stand rejected under § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al) in view of U.S. Patent Application Publication No. 2004/0268401 (Gray et al). Applicant respectfully traverses the rejection.

Dependent claims 24-25 and 55 depend directly or indirectly from one of independent claims 14 or 52, respectively, and thus, are allowable as depending from an allowable base claim. Applicant explains above why the primary reference does not

disclose, teach, or suggest all the elements of independent claims 14 and 52. Gray fails to compensate for these deficiencies. These claims are also allowable for their own recited features that, in combination with those recited in claims 14 or 52 are not disclosed, taught, or suggested by Kliger and/or Gray, alone or in combination.

Applicant respectfully requests withdrawal of the §103 rejection of these claims.

K. Claims 29-32 and 56-57 stand rejected under § 103(a) as being obvious over U.S. Patent Application Publication No. 2004/0177381 (Kliger et al) in view of U.S. Patent Application Publication No. 2002/0001386 (Akiyama et al). Applicant respectfully traverses the rejection.

Dependent claims 29-32 and 56-57 depend directly or indirectly from one of independent claims 14 or 52, respectively, and thus, are allowable as depending from an allowable base claim. Applicant explains above why the primary reference does not disclose, teach, or suggest all the elements of independent claims 14 and 52. These claims are also allowable for their own recited features that, in combination with those recited in claims 14 or 52 are not disclosed, taught, or suggested by Kliger and/or Akiyama, alone or in combination.

Applicant respectfully requests withdrawal of the §103 rejection of these claims.

Applicant respectfully submits that the cited references do not render the claimed subject matter obvious and that the claimed subject matter, is therefore, patentably distinguishable over the cited references. For all of these reasons, Applicant respectfully requests withdrawal of the §103(a) rejection of these claims.

NEW CLAIM

Applicant adds new **claim 58** to further clarify features of the claimed subject matter. Based on the above discussion regarding Kliger, Applicant believes that dependent claim 58 is also allowable for at least the same reasons. Additionally, claim 58 is in condition for allowance by virtue of its indirect dependency upon independent claim 33, as well as for the additional features that it recites.

Support for this claim addition can be found in the original specification at least at pages 9, lines 4-10. Again, no new matter has been introduced by this amendment.

CONCLUSION

For at least the foregoing reasons, claims 1-14, 17-18, 21-37, 40, and 42-58 are in condition for allowance. Applicant respectfully requests reconsideration and withdrawal of the rejections and an early notice of allowance.

If any issue remains unresolved that would prevent allowance of this case,
Applicant requests that the Examiner contact the undersigned attorney to resolve the issue.

Respectfully submitted,
Lee & Hayes, PLLC

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